

Abstract of the Disclosure

A system for protocol processing in a computer network has an intelligent network interface card (INIC) or communication processing device (CPD) associated with a host computer. The CPD provides a fast-path that avoids protocol processing for most large multipacket messages, greatly accelerating data communication. The CPD also assists the host CPU for those message packets that are chosen for processing by host software layers. A context for a message is defined that allows DMA controllers of the CPD to move data, free of headers, directly to or from a destination or source in the host. The context can be stored as a communication control block (CCB) that is controlled by either the CPD or by the host CPU. The CPD contains specialized hardware circuits that process media access control, network and transport layer headers of a packet received from the network, saving the host CPU from that processing for fast-path messages.